

ABSTRACT OF THE DISCLOSURE

A Virtual Access Core (VAC) manages and controls access to virtual machines. A Virtual Instruction Routine (VIR) protocol is used by all components of the system to pass instructions and information about a Virtual Session. The VAC  
5 issues commands in the VIR protocol language causing virtual machines to start and stop. A VIR host that hosts virtual machines responds to VAC commands. Web clients access the system via links, which a web server uses to send access requests to the VAC. The VAC responds by searching through process memory and database tables for information about free slots on a plurality of VIR hosts grouped into a  
10 Host Array. When one or more free slots have been identified, the VAC issues VIR Protocol commands instructing one or more VIR Hosts to load and start specific virtual machines in Specific Slots. Each VIR Host looks up a set of firewall rules dynamically created, with instructions on how to isolate and create a Virtual Network for that client session providing privacy and non-interference between  
15 virtual machines in the Host Array. The VAC passes instructions to a VNC Proxy enabling communication between the client session and the virtual machine. An example of use of the system is a Virtual Classroom where students are given access to a Virtual Network enabling them to perform practical exercises as an augmentation to their web based training.